

Facilities and Experimental Support (parallel Session)

- **Our primary responsibility is to support the construction and operations of facilities, beam lines and experiments.**

- **We are experienced in accomplishing Work For Others:**
 - NSRL**
 - SNS**
 - RHIC Experiments (during project phase)**

- **We have approximately 60 personnel**
 - 34 technicians**
 - 5 surveyors**
 - 15 trades**
 - 5 engineers**
 - Additional C-AD technical experts are available to us through the C-AD chief Mechanical and Electrical Engineers**
 - We augment our technical work force through C-AD manpower and temporary labor**
 - We augment our trades' manpower through the BNL trades pool.**
 - We utilize Basic Ordering Agreements (BOA), contracts, contract labor, and Task Orders.**

- **All Experiments are assigned a liaison engineer and together with a liaison physicist, they ensure cost, schedule, and quality are met.**
 - All tasks and personnel are accounted for in a weekly schedule.**
 - Task priorities are reviewed**
 - Monthly and yearly task and labor summaries are provided.**

Construction outline

Assumptions

SEB runs concurrently with RHIC

We assist the RHIC Experiments & Accelerator with upgrades at the same manpower level as we have in the past.

Beam line design and layout starts for KOPIO and MECO in 2005

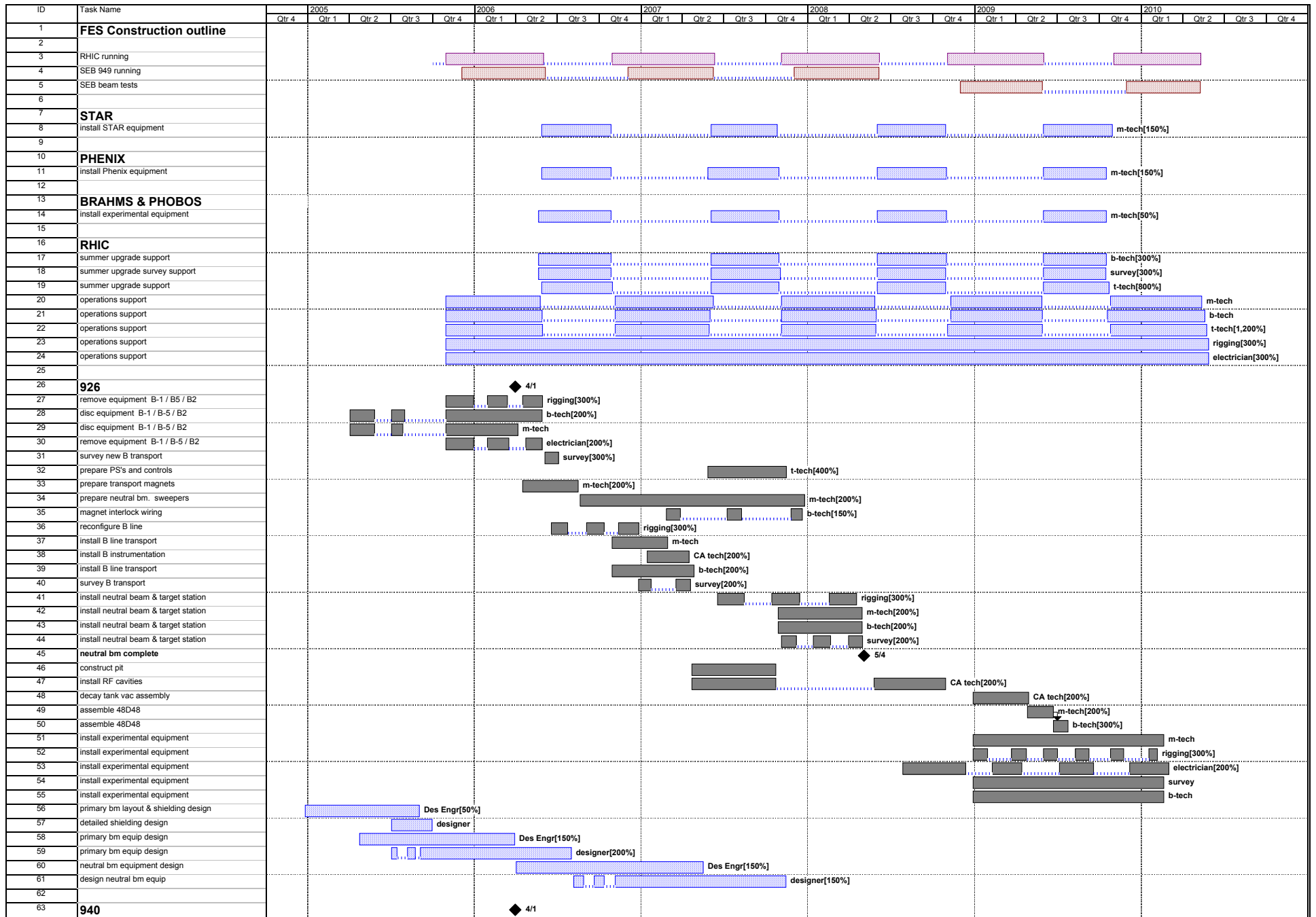
We start removal of the existing beam line (B line) for KOPIO in 2005

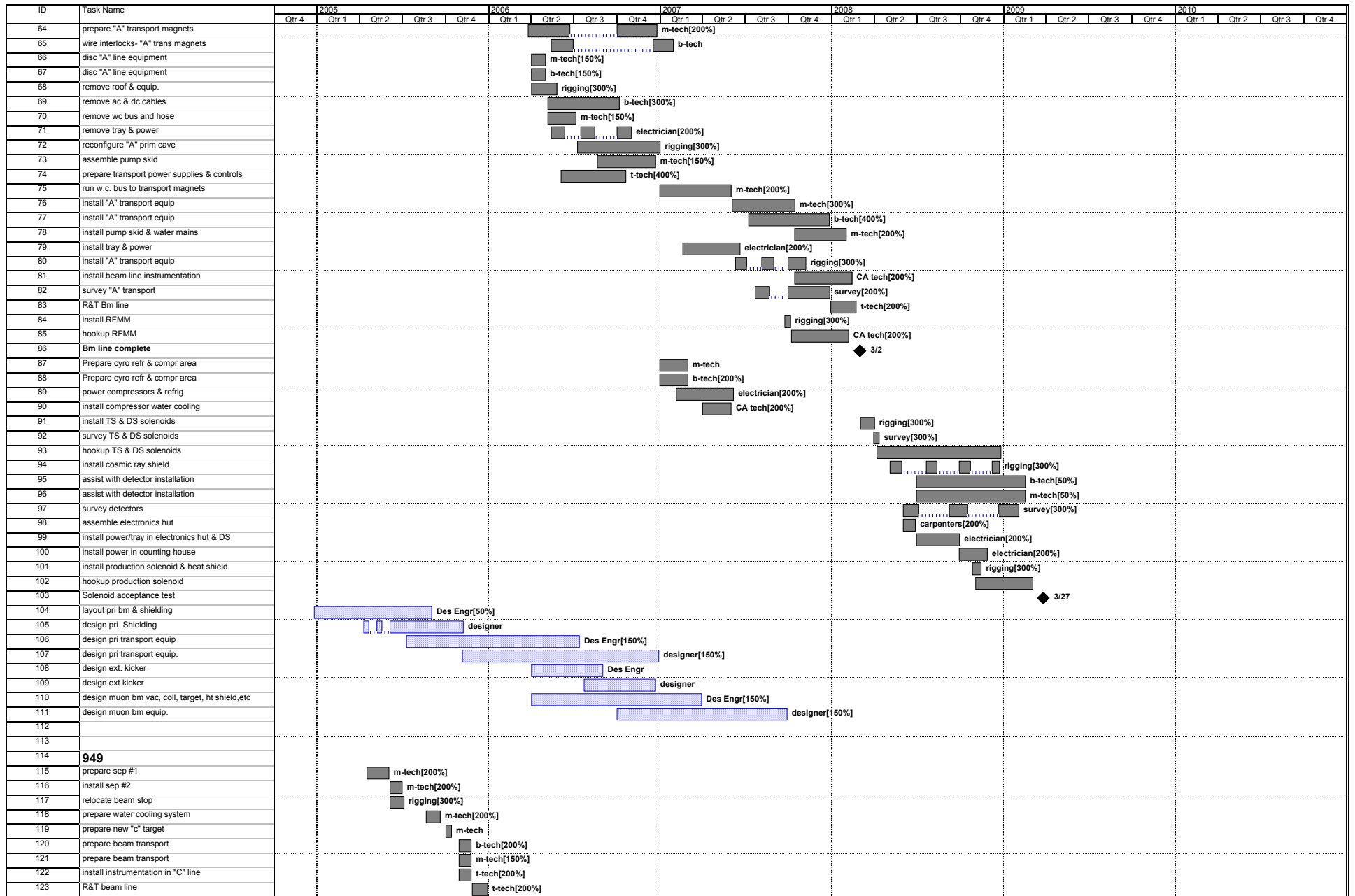
E 949 is prepared in 2005 for a 2006 running start.

Critical milestones for KOPIO and MECO were held, thereby allowing manpower to float.

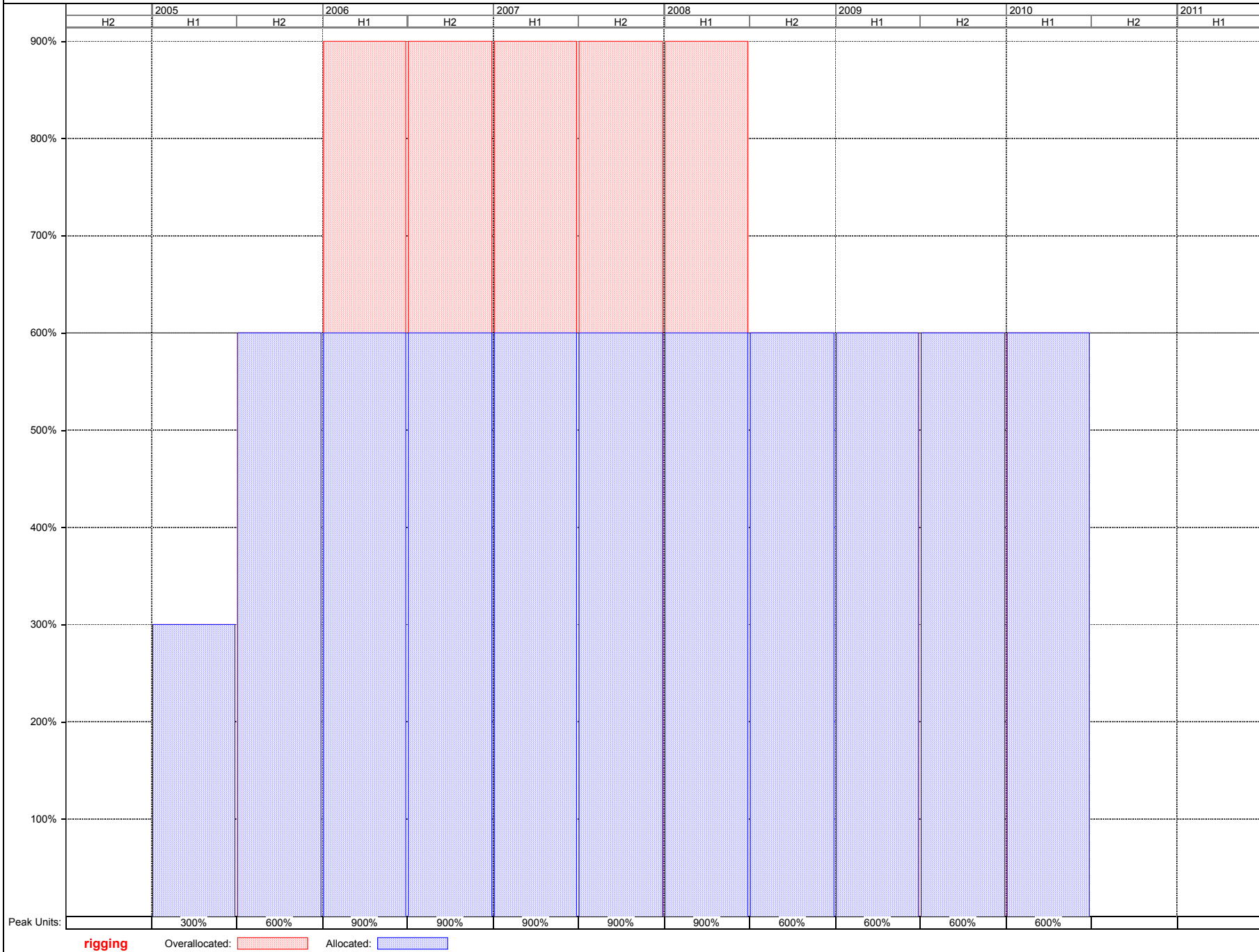
Conclusion

In general, we must double our existing manpower for approximately two years to meet critical RSVP milestones. Utilizing the flexibility we have in augmenting our existing manpower, this can be accomplished without affecting the RHIC program.

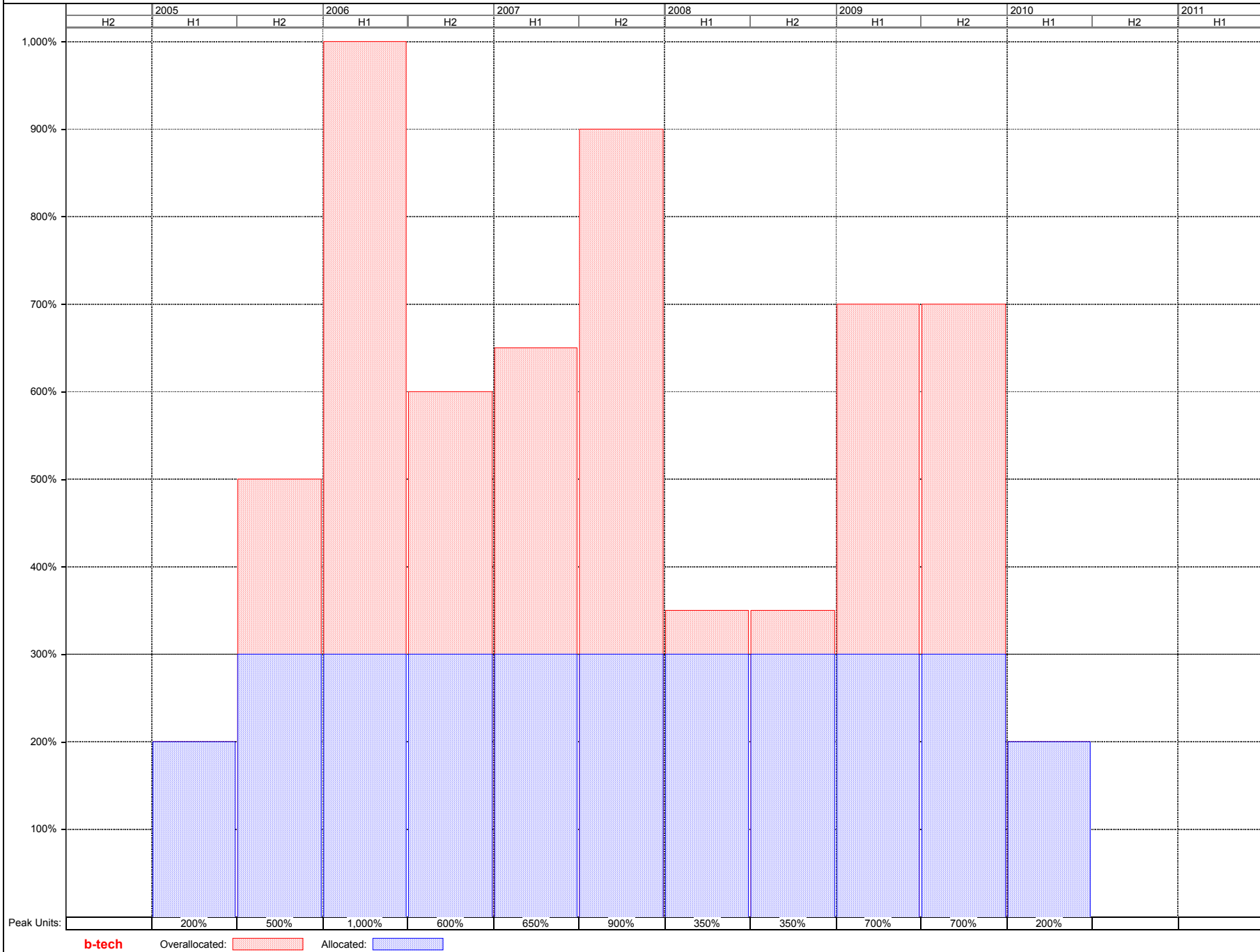




FES constr outline



FES constr outline



Decontamination and Decommissioning costs

Assumptions

A minimum of one year radiation cool-down is required for ALARA purposes

We return building 912 to its present state. Equipment that is typically reused such as magnets and shielding that meet ALARA criteria, will be left in place.

All equipment, specific to the Experiment will be disposed of through the proper waste stream.

All shielding activated over 5mr will be disposed of through the radioactive waste stream.

All floor areas activated over 5mr will be removed and replaced.

Full burdens apply to D&D

Only incremental D&D costs apply to E949 (new equipment installed for the planned 2006 run)

Conclusion

**D&D costs are a work-in-progress and will be approximately:
(without contingency)**

5.3M for MECO

5.3M for KOPIO

0.7M for E949

RSVP and E949 D&D Costs

The slow beam transport will de-commissioned starting at the point where it leaves the switchyard shielding to the RSVP and E949 targets, "A", "B", & "C" This will include disconnecting & removing magnets and power supplies, removing cables, vacuum, & instrumentation. All commonly reused valuable equipment such as magnets will be stored except for equipment specific to the RSVP experiments such as the solenoids and the extinction kicker. These will be considered radioactive waste. All shielding activated over 5mr will be considered radioactive waste. The cost of removing and disposing of the experiments will be included. Since building 912 is a multiple use building, shielding under 5mr will be left in the building. All concrete floor areas over 5mr will be removed and replaced, but no radioactive soil remediated. Power and water modifications for RSVP will be removed except where considered an upgrade.

Experiment	labor costs K\$'s	disposal costs K\$'s	Total K\$'s
949 (incremental)			
remove Q1/Q2/D1	12	188	
remove target	1	5	
remove beam stop shielding >5mr	30	130	
remove beam stop shielding >100mr	8	64	
sub total direct	51	387	
Composite Indirect Rates			
Labor Rate incl. Fringe+PAB+O/B+G&A	49		
MST Rate incl. G&A+M/B+S&Sec+FCR		217	
Total 949	100	604	704
926 (K0PI0)			
tech labor ---beam line removal	800		
DTS labor ---beam line removal	650	333	
decontamination	50	15	
tech labor ---experiment removal	96		
DTS labor ---experiment removal	32	20	
RF cavity removal	20	24	
neutral beam disposal >5mr	64	275	
beam stop disposal >5 mr	47	300	
roof beam disposal >5mr	16	210	
sub total direct	1775	1177	
Composite Indirect Rates			
Labor Rate incl. Fringe+PAB+O/B+G&A	1707		
MST Rate incl. G&A+M/B+S&Sec+FCR		659	
Total 926	3482	1836	5318

940 (MECO)	labor costs K\$'s	disposal costs K\$'s	Total K\$'s
tech labor ----beam line removal	551		
DTS labor --- beam line removal	608	333	
tech labor ---experiment removal	64		
DTS labor --- experiment removal	30	10	
tech labor ---solenoids & cryogenics	48		
DTS labor --- store cryo system	64		
DTS labor --- remove target solenoid	15	10	
decontamination	50	15	
prep and dispose of snake solenoids	21	300	
remove target, target shield & dispose	10	160	
prep and dispose of production solenoid	21	130	
remove wall shielding >5 mr	32	390	
remove roof shielding >5 mr	16	94	
remove lambertsons & kicker	10	20	
sub total direct	1540	1462	
Composite Indirect Rates			
Labor Rate incl. Fringe+PAB+O/B+G&A	1481		
MST Rate incl. G&A+M/B+S&Sec+FCR		819	
Total 940	3021	2281	5302
Total for all experiments			
Total Direct Costs	3366	3026	
Total Indirect Costs	3237	1694	
Subtotal Costs	6603	4720	
Contingency @ 25%	1651	1180	2831
Total Costs	8254	5900	14155